

IN THE SPECIFICATION

Please insert the following paragraph on page 1, line 4 (after the title):

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This application claims the benefit of U.S. Serial Number 09/337,086, entitled "Integrated Multilayered Microfluidic Devices and Methods for Making the Same", filed June 21, 1999, which is a continuation-in-part of U.S. Serial Number 09/235,081, filed on January 21, 1999, which, in turn, claims the benefit of U.S. Provisional Application Number 60/103,701, filed October 9, 1998.

IN THE CLAIMS

1. (Amended) An apparatus for performing parallel, independently controlled molecular reactions, comprising:

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- (a) a supporting substrate comprising a ceramic layer,
 - (b) said substrate comprising channels and vias defining a plurality of separate well structures separated by thermal insulating material,
 - (c) a heater associated with each well structure,
 - (d) a cooling element associated with each well structure,
 - (e) a temperature monitor associated with each well structure; and
 - (f) conductive pathways extending along and into the device, wherein the pathways make electrical connection to said heaters, coolers, or temperature monitors.

2. (Unchanged) The apparatus of Claim 1, wherein the molecular reaction is polymerase chain reaction.